Appl. No. 09/770,762
Amdt. dated July 28, 2005
Amendment
Examining Group 2154

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (currently amended) A communication system, comprising:

a ~~first~~ plurality of Web servers having respective Internet Protocol (IP) addresses, each Web server ~~client~~ having a first proxy, a first memory, and a plurality of first processes, the first memory having a plurality of first slots, each first slot being assigned to one of the plurality of first processes and configured to store data to be transmitted or received by the assigned first process;

a naming server configured to provide an IP address of a selected Web server to a client, so that the client can send a first request to the selected Web server; and

a plurality of executing servers, each executing server having a second proxy, a second memory, and a plurality of second processes, the second memory having a plurality of second slot being assigned to one of the plurality of second processes and configured to store data to be transmitted or received by the assigned second process,

wherein the first proxy and second proxy are software modules configured to form a communication link with each other, and

wherein the selected Web server transmits a second request to one or more of the executing servers in response to the first request using the first and second proxies. ~~the first client is a Web server and the server is an executing server~~.

2.   (canceled)

3.   (currently amended) The communication system of claim 2, wherein the ~~second~~ client is a browser ~~in the Web server~~.

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4.   (original) The communication system of claim 1, wherein each of the first slots, includes:

a first input space to temporarily store data to be transmitted to a destination node via the first proxy, wherein the data is generated by the first process that is associated with the first input space; and

a first output space to temporarily store data received from a source node via the first proxy, wherein the data received is directed to the first process that is associated with the first output space.

5.   (original) The communication system of claim 4, further including a plurality of mark devices, each mark device being assigned to one of the first input spaces to indicate whether data can be written into the first input space to which the mark device is assigned and to one of the first output spaces to indicate whether the first output space to which the mark device is assigned contains data received from the source node via the first proxy.

6.   (original) The communication system of claim 5, wherein each of the second slots, includes:

a second input space to temporarily store data to be transmitted to a destination node via the second proxy, wherein the data is generated by the second process that is associated with the second input space; and

a second output space to temporarily store data received from a source node via the second proxy, wherein the data received is directed to the second process that is associated with the second output space.

7.   (original) The communication system of claim 6, further including a plurality of mark devices, each mark device being assigned to one of the second input spaces to indicate whether data can be written into the second input space to which the mark device is assigned and to one of the second output spaces to indicate whether the second output space to

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which the mark device is assigned contains data received from the source node via the second proxy.

8. (canceled)

9. (currently amended) An communication system, comprising:

a plurality of browsers;

a plurality of Web servers to handle requests from the plurality of browsers, each Web server having a first proxy, a first shared memory, a plurality of first processes, and a plurality of mark devices, the first memory having a plurality of first slots, each first slot being assigned to one of the plurality of first processes and configured to store data to be transmitted or received by the assigned first process, the mark devices being assigned to the first slots and being operable to indicate whether data can be written or read from the first slots by the first processes, each Web server being associated with an Internet Protocol (IP) address;

a naming server configured to provide IP addresses of selected Web servers to the browsers, so that the browsers can send first requests to the selected Web servers using the IP addresses received from the naming server; and

a plurality of executing servers to communicate with the Web servers, each executing server having a second proxy, a second memory, a plurality of second processes, and a plurality of mark devices, the second memory having a plurality of second slots, each second slot being assigned to one of the plurality of second processes and configured to store data to be transmitted or received by the assigned second process, the mark devices being assigned to the second slots and being operable to indicate whether data can be written or read from the second slots by the second processes,

wherein the first proxy and second proxy are software modules configured to form a communication link with each other,

wherein each first slot includes a dedicated input section to receive data to be transmitted to the one or more of the executing servers and a dedicated output section to store data to be received from one or more of the executing servers, and

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wherein each second slot includes a dedicated input section to receive data to be transmitted to the one or more of the Web servers and a dedicated output section to store data to be received from one or more of the Web servers.

10.   (currently amended) A server in a communication system, comprising:

a proxy to provide a communication link with another node in the communication system, the proxy being a software module to form a communication with another proxy residing remotely in another server;

a plurality of processes running on the server;

a shared memory having a plurality of slots to store data to be transmitted and received by the processes via the proxy; each slot being assigned to a particular one of the process; and

a plurality of process mark devices, at least one being assigned to each slot to regulate data flow into and out of the slots of the shared memory,

a plurality of proxy mark devices, each corresponding to one of the process mark devices,

wherein each process mark device cooperates with the corresponding proxy mark device to regulate data being inputted to and outputted from the corresponding slot.

11.   (original) The server of claim 10, wherein each of the slots includes:

an input space to store data transmitted by the process assigned to the slot; and

an output space to store data to be received by the process assigned to the slot.

12.   (original) The server of claim 11, wherein each of the input spaces is assigned one of the mark devices which is used to indicate when the input space to which the mark device is assigned is available to receive data, and each of the output spaces is assigned one of the mark devices which is used to indicate when the output space to which the mark device is assigned contains data to be transmitted.

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13.   (currently amended) A method for transferring data in a communication system having a first ~~client~~ sever and a second server, wherein the first ~~client~~ server has a first proxy, a first shared memory, and a plurality of first processes, and the second server has a second proxy, a second shared memory, and a plurality of second processes, the method comprising:

generating, within one of the first processes, a request to be transmitted to one of the second processes;

storing the request into the first shared memory having a plurality of first slots, wherein each of the first slots is assigned to one of the first processes and the request is stored in the first slot assigned to the first process that generated the request;

transmitting the data stored in the first slot to the server via the first proxy;

receiving the transmitted request via the second proxy that has a communication link established with the first proxy;

storing the received request into the second shared memory having a plurality of second slots, wherein each second slot is assigned to one of the second processes and the received request is stored in the second slot that is assigned to the second process to which the data is directed; and

reading the data stored in the second slot,

wherein the first server includes a plurality of process mark devices to regulate data flow into and out of the first slots, at least one being assigned to each first slot,

wherein the first server includes a plurality of proxy mark devices associated with the first proxy, each proxy mark device corresponding to one of the process mark devices, and

wherein each process mark device cooperates with the corresponding proxy mark device to regulate data being inputted to and outputted from the corresponding first slot.

14.   (currently amended) The method of claim 13, wherein the communication system further includes a ~~second~~ client ~~that is a client~~ of the first ~~client~~ server, wherein the request transmitted to the second server is generated in response to a request transmitted by the ~~second~~ client to the first ~~client~~ sever.

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15.   (currently amended) The method of claim 14, wherein the first ~~client~~ server is a Web server and the ~~second~~ client is a browser.

16.   (original) The method of claim 13, wherein each of the first slots includes a first input space and the request stored in the first slot is stored in the first input space of that first slot.

17.   (currently amended) The method of claim 16, ~~wherein the first client further includes a plurality of mark devices, each of the mark devices being assigned to one of the first input spaces, the method~~ further comprising:

changing ~~the~~ a state of ~~the~~ a process mark device corresponding to the ~~once the data is stored in the~~ first input space wherein the request is stored to indicate that the first input space contains data.

18.   (original) The method of claim 16, wherein each of the second slots includes a second output space and the request stored in the second slot is stored in the second output space of that second slot.

19.   (currently amended) The method of claim 18, wherein the second server further includes a plurality of process mark devices, each of the process mark devices being assigned to one of the second output spaces, the method further comprising:

changing ~~the~~ a state of ~~the~~ a process mark device corresponding to ~~once the data is stored in~~ the second output space wherein data is stored to indicate that the second output space contains data.

20.   (currently amended) The method of claim 13, wherein there are a plurality of the first ~~clients~~ servers and a plurality of the second servers.

21.   (original) The method of claim 13, further comprising:
generating, within the second process which received the request, a reply to the request;

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storing the request into the second shared memory having a plurality of second slots, each second slot being assigned to one of the second processes, wherein the reply is stored in the second slot assigned to the second process that generated the reply;

transmitting the reply stored in the second slot to the first client via the second proxy;

receiving the transmitted the reply via the first proxy;

storing the received data into the first shared memory, wherein the received data is stored in the first slot that is assigned to the first process that had transmitted the request; and

reading the reply stored in the first slot.

22-29. (canceled)